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ABSTRACT

An experiment evaluated the impact of an integrated formal, analytic, and functional communicative approach to second language teaching in French immersion on French language proficiency. The impetus for the study arises from research indicating that immersion children show persistent weaknesses in their grammatical skills despite the fluent, functional proficiency they achieve in their second language. The experimental materials consist of a curriculum unit focusing on the conditional and involving students in planning an imaginary space colony. The materials were designed to teach the conditional by providing opportunities for students to use this form in natural, communicative situations; by reinforcing their learning with systematic linguistic games; and by encouraging metalinguistic awareness. Pre-, post-, and follow-up tests of oral and written French were administered to grade 7 early French immersion experimental and control classes (315 students from four school districts in the metropolitan Vancouver, British Columbia). Results showed that the experimental group performed significantly higher in writing in both post- and follow-up testing. Although these results were not found for speaking, examination of the individual class data revealed greater and more consistent growth in speaking for the experimental than for the control classes. (MSE)

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**Integrating Formal and Functional Approaches
in Language Teaching in French Immersion:
An Experimental Study***

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Abstract

This experimental study was designed to evaluate the impact on French language proficiency of an integrated formal, analytic and functional communicative approach to second language teaching in French immersion. The impetus for the study arises from research indicating that immersion children show persistent weaknesses in their grammatical skills despite the fluent, functional proficiency they achieve in their second language. The experimental materials consist of a curriculum unit focussing on the conditional and involving students in planning an imaginary space colony. They were designed to teach the conditional by providing opportunities for students to use this form in natural, communicative situations; by reinforcing their learning with systematic, linguistic games; and by encouraging their metalinguistic awareness. Pre-, post- and follow-up tests of oral and written French were administered to grade 7 early French immersion Experimental and Control classes. The results showed that the Experimental group performed significantly higher in writing both in the post and follow-up testing. Although this was not found for speaking, an examination of the individual class data revealed greater and more consistent growth in speaking for the Experimental than for the Control classes, suggesting that they benefited somewhat from the experimental treatment in this domain as well.

Introduction

The immersion approach to language teaching has become increasingly common in Canadian and American schools. In this approach, the children's second language is used as the language of instruction and means of communication for all or most of the school day. This provides children with the opportunity to learn their second language much as they had their first language, that is, through using it in natural and meaningful situations.

Extensive research has attested to the effectiveness of immersion programs in enabling children to attain high levels of communicative proficiency in the second language, while at the same time allowing them to acquire subject matter content and progress in their mother tongue at rates equivalent to their peers in regular English programs (Day & Shapson, 1989; Genesee, 1987; Swain & Lapkin, 1982). However, research has also shown that there still exist major gaps in immersion children's acquisition and control of many aspects of grammar despite the fluent, functional proficiency they achieve in their second language (Adiv, 1980, 1984; Day & Shapson, 1987; Harley & Swain, 1984). Indeed, in Canada, the improvement of immersion children's oral and written grammar has been identified as a major priority by immersion educators, and curriculum-based research has been called for to establish how this improvement may best be accomplished. This research project was designed in response to this need and had the following objectives:

- a) to conduct an experimental study to determine whether grade 7 immersion students' acquisition and use of the conditional can be improved; and
- b) to design curricular materials to effect this improvement.

Curricular materials focussing on the conditional and integrating formal, analytic with functional, communicative approaches to language teaching were developed by the researchers in cooperation with immersion practitioners. The materials were designed to teach the conditional by providing opportunities for students to use this form in natural, communicative situations; by reinforcing their learning with systematic, focussed games or exercises; and by encouraging their metalinguistic awareness. They were also designed to encourage integration of concepts learned in other subjects (i.e., science and social studies) with language learning and to promote group work and social learning. Because of the increasing attention to these features of instruction, the implications of this study go beyond immersion to include other kinds of second language teaching situations.¹

The experimental study, designed to evaluate the impact of the materials on French language proficiency, was conducted in four school districts in the metropolitan area of Vancouver, British Columbia. An Experimental Group composed of six grade 7 early French immersion classes was exposed to the materials over a period of approximately six weeks; and their performance on pre- and post-tests of oral and written French was compared with that of a Control Group, composed of six classes of appropriately matched grade 7 early immersion students, who did not receive the instructional treatment.² Their performance on the same measures was also compared on follow-up tests administered toward the end of the school year to determine the long-term effects of the treatment.

The conditional was chosen as the focus of investigation because previous immersion research indicated that students make slow progress in

gaining productive control over this form in speaking. Harley and Swain (1984) found accuracy rates of only 15%, 41%, and 56% for Ontario immersion students in grades 4, 6, and 10, respectively, compared to an accuracy rate of over 94% for native French-speaking students. Previous research also suggested that students may not have sufficient input in the classroom to allow them to master this form. Swain and Lapkin (1986) reported that less than 4% of finite verbs used by grades 3 and 6 immersion teachers were in the conditional. Curricular intervention may help overcome this restricted input. It may at the same time help promote opportunities for children to use language to express higher level functions (e.g., predicting and hypothesizing), a need which has been found for first language classrooms (Shafer, Staab, & Smith, 1983; Staab, 1983) and which is becoming more apparent for second language classrooms (see for example, Chamot & O'Malley, 1987).

Literature Review

The need to improve immersion children's oral and written grammar has been signalled in many studies of immersion programs. To deal with this, some researchers have offered suggestions which are more consistent with traditional French second language pedagogy and have devised specific classroom activities and techniques for improving grammar (e.g., Obadia, 1981). Others have emphasized the need for exposing students to a wider variety of contexts in which they can use French (e.g., Lapkin & Swain, 1984). Techniques for integrating language with content learning are presented in a recent handbook of immersion teaching developed in the United States (Lorenz & Met, 1989). To date, the potential which grammar has for providing a framework for rich and meaningful learning has not been exploited thoroughly enough. Experimental

research based on second language curriculum theory is critically needed to guide and stimulate a more comprehensive and systematic approach to curriculum development for language teaching in immersion programs.

Curriculum theorists in second language learning have recently provided a useful framework for conducting this research. For example, Stern (1982) has proposed a curriculum model which requires the integration of four distinct syllabi--language, culture, communicative activities, and general language education. The language syllabus represents the analytic approach to language study, while the communicative activities allow for experiential use of the language. Allen (1983) has argued that there is a need for a three-level framework for curriculum design to bridge the gap between the dichotomous view of second language teaching methods as either manipulation of formal patterns or the full communicative use of language. He has advocated a "variable focus" curriculum model, which has the following three components: a structural-analytic component which focuses on grammar and employs controlled grammatical teaching techniques; a functional-analytic component which focuses on discourse features of language and employs controlled communicative teaching techniques; and a non-analytic component which focuses on the natural unanalyzed use of language and employs fully communicative, experiential teaching techniques. These three components are meant to be complementary and would receive varying emphases according to the particular needs and circumstances of the program.

Harley and Swain (1984) have suggested that a multi-level model of language teaching such as that proposed by Allen should be investigated for its applicability to immersion, a program mainly based on the functional,

communicative approach. They have hypothesized that the immersion approach can be improved by increasing students' exposure to language which is specifically designed to focus their attention on problematic grammatical forms (focussed input) and by at the same time providing students with more opportunities to use the relevant forms in meaningful situations (productive output). Harley (1987a, b) conducted an experimental study to test this hypothesis, using curricular materials designed to provide focussed teaching on the semantic distinctions between the present perfect and the imperfect in combination with extended opportunities for students to use these tenses in meaningful situations. The findings of the study indicated that while experimental classes were significantly superior to control classes on measures of oral and written French in the short term (i.e., from pre- to post-testing), there were no significant differences over the long term (i.e., both groups improved over time).

The present study on the conditional continues the line of investigation initiated by the above researchers. However, while this study is similar to Harley's in design and in many procedures, it focuses on a different point of grammar and uses a slightly older age group of students (grade 7 vs. grade 6). The experimental materials developed for the present study also differ from those by Harley in that they require more instructional time and incorporate various instructional features (e.g., cooperative learning approach and group evaluation procedures) designed to maximize student interaction and to encourage conscious awareness of language use.

It is important to point out that the approaches in these studies diverge from Krashen's widely held theory on second language learning, which

ascribes only limited importance to production and grammatical teaching in fostering second language acquisition. According to Krashen (1981,1984), comprehensible input is the only causative variable in second language acquisition; production is not a cause but rather a result of acquisition and therefore plays only a limited role in promoting acquisition. Grammatical teaching is largely ineffective in promoting subconscious acquisition, which is the major determinant of fluency in a language. Such teaching can only contribute to conscious learning, which can be used as a monitor to edit or correct speech only under certain conditions. Recently, Krashen's position has been challenged by Swain (1985), who has argued that production has an important function in forcing the language learner to move from meaning to grammar. According to this view, "producing the target language acts as one of the triggers that force language learners to pay attention to the means of expression needed to successfully convey their intended meaning" (Swain & Lapkin, 1986, p. 7). Although the effects of a single variable on second language learning cannot be isolated in the current experimental study, it is hoped that the findings can provide information relevant to the theoretical debate on the importance of production and grammatical teaching in the language acquisition process.

Methodology

Sample

The sample consisted of 315 grade 7 early immersion students from four school districts in the metropolitan Vancouver area. In all, 12 classes participated in the study, with two classes each from two districts and four classes each from the remaining two districts. The participating classes were

selected with the help of district administrative personnel, who were asked to recommend grade 7 immersion classes which were most similar to one another in general socio-economic background and ability levels of the students and the teaching experience of the teachers. Split classes were excluded. The pool from which the selection was made in each district was limited, with two of three or four eligible classes chosen in two districts (Districts A and B), and all four or four of five eligible classes chosen in the other two districts (Districts C and D).

The assignment of classes to Experimental or Control groups was stratified by district and made on a random basis by the research team, using the pre-test results and the information provided by the school districts to match the two groups. In all, there were six classes in both the Experimental Group and the Control Group. The number of students in each class ranged from 23 to 30 students in the Experimental Group and from 24 to 29 in the Control Group. Table 1 summarizes the distribution of the student sample.

Insert Table 1 about here

The total number of teachers involved was five in each of the Experimental and Control Groups. Teachers were asked to complete a questionnaire designed to gather information to judge the comparability of the Experimental and Control classes. The questionnaire information indicated that both the Experimental and the Control teachers had an average of 5.4 years teaching experience. Except for one Experimental and one Control teacher who indicated that they were "Anglophone with a good mastery of French", all teachers described themselves as being either "totally bilingual with equal

competence in French and English" or "Francophone with a good mastery of English."

The average amount of instructional time in French was approximately three hours a day for both the Experimental and Control classes. Except for one teacher who said that his/her class was "above average", all Experimental teachers indicated that their grade 7 immersion class was "average" in French language ability. There was more variability in the responses of the Control teachers: one Control teacher indicated an "average" class; one, an "above average" class; and one, a class in between these two categories; the remaining two teachers indicated classes of "mixed ability."

Design and Analyses

This study had an experimental design, with an Experimental Group composed of six grade 7 early French immersion classes from four school districts and a Control Group composed of six classes of appropriately matched grade 7 early French immersion students from the same school districts. The Experimental Group received the treatment, which was a specifically designed curriculum unit focussing on the conditional, over the period of 5-7 weeks. The Control Group received their normal classroom instruction. Written and oral measures of French were administered to both groups prior to the onset of the experimental treatment (pre-test) and immediately after its completion (post-test). Tests were administered toward the end of the school year to determine the long-term effects of the treatment (follow-up test).

Statistical comparisons were conducted between the pre-test results of the Experimental and Control groups to determine their relative standing at the start of the experiment. Repeated measures analysis of variance was used to

statistically compare the growth of the two groups in French writing and speaking over the three testing times (i.e., pre, post, and follow-up). Only students who had participated at all three testing sessions were included. The data for the two forms of each test were combined for the analyses, as acceptable correlations had been obtained between the pilot version forms (Pearson Correlation Coefficient, .76 for the cloze test and .73 for the written composition).

Procedures

All 12 participating classes were pre-tested in early January. The research team then assigned classes to Experimental or Control groups on a stratified random basis and sent the teachers of the Experimental classes an information letter explaining the design and purpose of the project and notifying them of their participation. The Experimental teachers were also sent a copy of the curriculum unit, which they were asked to review in preparation for a training workshop which was held near the end of January. All experimental teachers attended the workshop, which provided information on the rationale of the project, the experimental materials, and the conduct of the experiment. Teachers were asked to teach the curriculum unit over a 5-6 week period beginning in the first week of February.

The curriculum unit was designed to be used within a 5-6 week period. However, because of various other classroom activities and projects, it took longer for some experimental classes to complete the unit and thus, the length of the experimental period varied from five to seven weeks. The post-testing was scheduled in March to accommodate this variation. Experimental classes were tested during the week immediately following the completion of the unit,

and Control classes were tested during the same week as the corresponding Experimental class in their district. The follow-up testing was scheduled so that classes would be tested 11 weeks following the time of their post-testing (late May-early June).

Description of Experimental Materials

The experimental materials consist of a curriculum unit focussing on the use of the conditional in hypothetical situations and in polite requests and involve students in planning an imaginary space colony. The materials were designed to provide experiences in all four language skills (i.e., reading, writing, listening, and speaking) and to mirror the conditions found to be of critical importance in effective second language learning programs. These have been identified by Genesee (1987) as integration of second language teaching and content teaching; classroom interaction characterized by negotiation of meaning; and a curriculum of study that is intrinsically motivating.

Some of the major instructional features include the use of: a) the cooperative-learning approach to maximize student interaction and use of the conditional in natural, communicative situations; b) linguistic games and exercises regularly preceding or initiating each period to reinforce the use of this form in more formal, structured situations; and c) group- and self-evaluation procedures to encourage students to develop conscious awareness of their language use, particularly with respect to the conditional. In these procedures, one student is designated to be the "monitor of French" during each meeting and is asked to record each time the conditional is used and each time English is spoken on evaluation forms provided in the student folders.

The curriculum unit includes the following major group activities: planning of a space colony; presentation of an oral report describing and justifying the students' plan; making a model of the plan; preparation of a written report describing each part of the colony and its importance; and preparation of a newspaper article describing the life of the space pioneers. The unit is designed to be used over a period of 5-6 weeks, with approximately three 45-60 minute periods per week.³ An outline of the curriculum unit and a description of the linguistic games are presented in Figures 1 and 2, respectively.

Insert Figures 1 and 2 about here

All materials required for teaching the unit were provided to the teachers in the Experimental Group. These were written in French and included: a teacher's guide, a series of envelopes containing the student materials in sufficient number for all students in the class, a classroom poster explaining the organization of student groups, and student folders for keeping materials. Two introductory sections provided an overview of the unit, a descriptive summary of the various uses of the conditional, and the procedures for forming student groups and evaluating group work. Subsequent sections outlined the goals and objectives and the procedures for conducting the major activities and provided detailed instructions, suggested timelines, and student materials for all tasks. A teacher questionnaire was placed at the end of each task and at the end of the curriculum unit. These questionnaires, which were adapted from those developed by Harley (1987a), were designed to provide information on how much time teachers spent and to gain their opinions on student interest in the various tasks and the unit as a whole and their appropriateness and

effectiveness. Teachers were asked to mail all the completed questionnaires to the research team after they had completed the unit.

A variety of student materials was provided, including information about the theme of the unit, instructions for the tasks and linguistic games, glossaries of linguistic expressions, and group and self-evaluation sheets. The conditional was used wherever possible in the text to provide students with exposure to printed material containing this form. The materials were distributed to the students by the teachers as they were needed. Students were required to keep all materials related to the project, along with their written work, in folders provided with the curriculum unit.

Instruments

The instruments developed for the study consist of a cloze test, a written composition, and an oral interview. There were two forms for each of the three tests. These were distributed randomly in the pre-testing so that half the students in each class received Form A and the other half received Form B. This distribution was reversed in the post-testing so that students received a different form than they had in the pre-testing; the original distribution was maintained in the follow-up so that students received the same form as in the pre-test.

All students in the class received the composition and the cloze test, in that order; and a sample of nearly one-third of the students (8 students per class), randomly selected by the examiner at the time of pre-testing, received the oral interview. Francophone students were excluded from the speaking sample.

All testing was conducted by three trained Francophone examiners following standardized procedures developed by the research team. Students wrote the composition and cloze tests in their own classrooms, and they were interviewed on a different day in a quiet room separate from the classroom. The interviews were recorded. A description of the instruments and the scoring procedures follows.

Cloze tests. These tests consisted of French dialogues in which blanks were substituted for missing verbs. Students were asked to complete the dialogue by putting the verbs, which were provided in infinitive form under the blanks, in the correct tense. There were 32 blanks in each form; of these, 27 were required to be in the conditional, and the remaining in present or past tenses. Only the conditional verbs were scored, using the rules described below for the written composition. Test reliabilities for this test were established on the basis of the pre-test results ($\alpha = .92$).

Written compositions. Students were instructed to choose a comic character (Form A) or a famous person (Form B) that they would like to be and to write a paragraph beginning with the words: *Si j' étais* They were given a maximum of 15 minutes to complete this task.

The paragraphs were scored by determining the number of obligatory conditional contexts supplied by the student and by examining the verbs in these contexts. If a verb was not in the conditional, it was scored as 0; if a verb was in the conditional, it was scored as 1, 2, or 3 according to the degree of correctness of the forms.⁴ A mean score was calculated based on the ratio of total number of points received to the total number of conditional contexts multiplied by three.

Oral Interviews. The oral interviews were designed to elicit the use of the conditional in hypothetical situations. One question was also included to elicit the conditional of politeness. Both forms contained a preliminary warm-up section which included questions on the student's age, family, and previous or forthcoming vacation. In Form A, students were shown a Club Med Album to browse through and were then asked to talk about where they would go and what they would do if they won a two-week holiday. After talking freely on their ideal holiday, they were asked what they would do in the evening, what their parents would do, and what they would do if they were given \$500 spending money. In the second part of the interview, students were requested to play the role of an interviewer and to ask the examiner questions about an ideal holiday. In order to elicit the conditional of politeness, they were told to first ask the examiner for the microphone. If they did not use the conditional, they were asked to rephrase their request in a more polite fashion. Form B followed a similar format as Form A, except that students were shown an album of Vancouver and asked to talk about what they would do if they were to spend three days in Vancouver with a few young visitors from out of town.

Students' voices were recorded. All tapes were transcribed in an orthographic transcription complemented by a phonetic transcription where necessary. All obligatory contexts for the conditional were calculated, and verbs used in these contexts were scored. The scoring procedures were similar to those developed for the written tests except that the "2" category, which is applicable only to written language, was not used.

The scoring of the written tests was completed immediately after each testing session by a native French-speaking marker, who was trained using the

pilot-test samples. Frequent calibration checks were made by one of the researchers, and inter-rater reliabilities between the marker and researcher were determined on a randomly chosen set of the pre- and post-tests. The results revealed that inter-rater reliabilities were quite high in all cases (Pearson Correlation Coefficient, .978 and higher). In order to control for scoring reliability over the three scoring times, the marker was asked to rescore a randomly chosen set of each of the pre-test instruments with the post-tests and a randomly chosen set of post-test instruments with the follow-up tests. The results revealed high intra-rater reliabilities over the three sessions (.993 and higher). The oral interview samples were scored after the three testing sessions were completed. They were scored twice by the native French-speaking marker in collaboration with one of the researchers.

Results

Statistical Analyses of Group Results

Pre-Test. Preliminary analyses comparing the performance of the Experimental and Control groups at the time of pre-testing indicated that there were no significant differences between the two groups on either the written or the oral measures (see Table 2).

Insert Table 2 about here

Experimental effects. The results of the repeated measures analysis of variance using the **class as the unit of analysis** (see Table 3) revealed that there was a significant group by time interaction on the cloze test and written composition, with the Experimental Group making greater gains than the Control

Group on these measures. There was no significant group by time interaction on the oral interview. The ANOVA results using the **student as the unit of analysis** revealed a similar pattern, with a significant group by time interaction on the written measures but not on the oral measure.

The results of post hoc comparisons (Tukey's HSD) indicated that the Experimental Group performed significantly higher than the Control Group on the cloze test and written composition both in the post-testing (HSD = 8.71** and 7.71**, respectively) and in the follow-up testing eleven weeks later (HSD = 7.77** and 10.60**, respectively).

Insert Table 3 about here

Figure 3 contains a graphic presentation of the group means for the three testing sessions (i.e., pre-, post-, and follow-up). Both the Experimental and the Control groups improved their performance on the written and oral measures from pre- to post-testing, and they maintained this improved performance in the follow-up testing (except for a slight decline for the Control Group on the written composition). The Experimental Group, however, made more improvement than the Control Group, with pre- to follow-up gains ranging from 11 to 21 points higher than those of the Control Group over this period.

Insert Figure 3 about here

Descriptive Analyses of Class Results

The results for the individual classes were examined in order to determine whether there were any differences in the pattern of growth among classes in either the Experimental or the Control Group. As one can see

(Figures 4-6), almost all Experimental and Control classes improved their performance on the oral and written measures from pre- to post-testing. However, the growth of the Experimental classes is more consistent from class to class, while the growth of the Control classes is uneven. One Control class (class 9), in particular, accounted for most of the gains made by the Control classes on the written measures, and the same class, along with one other class (class 10), accounted for most of the gains on the oral measure.

Information obtained from a questionnaire sent to the Experimental and Control teachers to gather background and descriptive information is helpful in interpreting the performance of this class (class 9). The teacher of this class reported that over one-half of the students (16/29) had been classified as "gifted." This teacher, who had previously taught in the Federal Government's language training program, indicated that he/she had taught all verb tenses since January, with 5-10 hours spent on the conditional vs. 3-4 hours or less reported by the teachers of the other Control classes. The teacher said that he/she combined grammatical teaching with practice through oral activities and written tasks and generally placed a great deal of emphasis on oral activities in teaching. Although cooperative learning was not used to any great extent, overall the information provided suggests that this Control teacher's instructional methods resembled those in the experimental curriculum unit in that grammar was taught through a combination of formal and functional approaches and a great deal of emphasis was placed on oral and written activities.

Insert Figures 4-6 about here

Teacher Information and Opinions on the Curriculum Unit

The results of the teacher questionnaire, which asked teachers to evaluate the curriculum unit as a whole, are summarized in this section. The results of the questionnaires on the individual tasks are presented in the final report.

The average number of hours teachers said it had taken them to complete the unit was 17.4, with one teacher indicating 17 hours, two indicating 15 hours, and two, 20 hours. No teacher did the optional activity which formed part of the unit.⁵ The mean rating for the question asking teachers how much they thought their students enjoyed the various activities in the curriculum unit was 3.80 (max=5), indicating that overall students "much" enjoyed the activities. The mean rating for the question asking teachers to evaluate the level of difficulty of the unit was 3.20 (max=5), indicating an overall "average" level of difficulty; and the mean rating for the question asking teachers whether they thought the educational objectives of the unit had been attained was 3.80, indicating that overall teachers felt that the educational objectives had been "well" attained. Teacher's open-ended comments at the end of the questionnaire were also very positive and indicated considerable enthusiasm and support for the experimental materials.

Summary and Conclusions

In a recent research agenda for immersion programs, how best to integrate grammar teaching into French immersion was identified as a key question for investigation (Lapkin & Swain, 1989). This experimental study was designed to address this need. The findings indicate that classes which had experienced an approach which integrated formal, analytic and functional, communicative activities in teaching the conditional made significantly higher

gains in their ability to use this form in writing than did classes which had not experienced this approach. Statistically significant gains were not revealed in speaking. However, an examination of the individual class data revealed greater and more consistent growth in speaking for the Experimental than for the Control classes, suggesting that they benefited somewhat from the experimental treatment in this domain as well.⁶

A consideration of the individual class data also showed that one Control class in particular was responsible for most of the growth made by the Control classes on the writing and speaking measures. Information gained from the teacher of this class provided some clues as to why this was the case. These included an unusually high percentage of "gifted" students in the class, a greater amount of time spent teaching the conditional than was spent in other Control classes (i.e., 5-10 hours vs. 3-4 hours or less), and the teacher's instructional approach which resembled the approach used in the experimental materials. Under these circumstances, it should perhaps not be surprising that this strong class showed a growth pattern which was more similar to that displayed by the Experimental than by the Control classes. These circumstances, however, do not normally occur in the majority of immersion classrooms, and the results reinforce the need for the systematic introduction of curricular materials of the kind used in the present study. As well, there is a critical need for observational research to be conducted in immersion classrooms so that effective strategies currently being used by immersion teachers to promote grammatical growth can be identified.

The findings of this study differ from the findings of the previously mentioned study by Harley (1987a), who found only short-term and no long-

term benefits accruing from the introduction of grammatically focussed curricular materials in immersion classrooms. However, this study differs from the Harley study in the age group of the subjects (grade 7 vs. grade 6) and in the grammatical focus of the experimental materials (conditional vs. present perfect and imperfect). The experimental materials developed for this study also differ from those in the Harley study in the amount and intensity of instruction (17.4 hours over 6 weeks vs. 11.9 hours over 8 weeks) and the use of the cooperative learning approach and group evaluation procedures. Any one or all of these differences may have contributed to the somewhat different pattern of results in the two studies and deserve consideration in the future design of curricular materials for immersion programs.

Overall, the findings of this study suggest that the improvement of immersion students' oral and written grammatical skills can be achieved through curricular intervention which integrates formal, analytic with functional, communicative approaches to language teaching. Especially because of the consistency of the results for experimental classes, we think that this integrated approach holds much promise for the improvement of language learning in immersion programs, particularly in those areas where the functional richness of grammar can be explored.

The study could not separate the benefits which may have accrued from the increased opportunities for comprehension provided by the materials from those which may have accrued from the increased opportunities for production. Therefore, it cannot help resolve the theoretical debate on the importance of production in second language learning (cf., Genesee, 1987; Krashen, 1981; Swain, 1985). Nor could the study isolate the effects of the various instructional

features of the experimental materials, such as the linguistic games, which provided focussed input, the cooperative learning approach, which encouraged productive output, and the group and self-evaluation procedures, which encouraged conscious awareness of language use. While this information is important and would contribute to our understanding of both theoretical and practical issues in second language learning, one should not preclude the possibility that the key to improvement of second language performance in the classroom may lie in the totality of the individual instructional features rather than in their isolation. It may also lie in the more general characteristics of the experimental materials which, in addition to providing a systematic grammatical focus, stimulated metalinguistic awareness and created an interactive and motivating learning environment in which language learning could take place.

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Footnotes

- ¹See, for example, Kagan (1986) and Long & Porter (1985) on cooperative learning and group work; Cantoni-Harvey (1987) and Chamot & O'Malley (1987) on content-based language instruction; and Sharwood Smith (1981) on the role of metalinguistic awareness in language learning.
- ²Early immersion begins in kindergarten and offers all instruction in French until grade 3, followed by from 50% to 80% French in grades 4-7.
- ³A package of supplementary materials containing suggestions for follow-up is provided for teachers to use on an optional basis after the experiment.
- ⁴Three (3) points were given to a conditional verb which was correct except for a minor spelling error in the stem of the verb or an error in the use of the reflexive pronoun. Two (2) points were given to a verb which contained: a) a spelling error in the personal ending if it was homophonous with the conditional (e.g., j'achèterai) or b) a double instead of a single "r" (or vice versa) in the formation of the conditional (for example, on ferrait for on ferait or on pourrait for on pourrait). One (1) point was given to a verb in which the conditional was incorrectly formed (for example, on allerait) or in which the personal ending was incorrect and not homophonous with the conditional (e.g., nous achèterait).
- ⁵Information from the questionnaire sent to all teachers at the end of the school year indicated that only one teacher used the supplementary activities provided by the research team as a follow-up to the unit. However, most teachers said that they tried to reinforce the use of the conditional in various ways.

⁶Control over the use of the conditional appears to be slower and more difficult to establish in speaking than in writing. Preliminary analyses of the speaking data provide a clue to one of the reasons. These analyses suggest that students frequently incorrectly use the infinitive in a series of coordinate verbs where the conditional is required in French. The reason may be that they are modelling the French on English rules for coordination, saying, for example, "J'irais en Californie et rester à Disneyland et aller nager tous les jours", on the basis of the English, "I would go to California and stay at Disneyland and go swimming every day".

Table 1
Distribution of Student Sample (n=315 students)

School District	<u>Experimental Group</u>			<u>Control Group</u>		
	School ^a	Class	N	School ^a	Class	N
A	1	1	23	1	1	29
B	1	1	23	1	1	26
C	2	2	26/27	2	2	28/28
D	1	2 ^b	27/30	1	2 ^b	24/24
TOTAL	5	6	156	5	6	159

^aExcept for the all-immersion schools in District D, all schools are dual-track schools (i.e., schools in which both a regular English program and a French immersion program are operating).

^bOne teacher taught the French immersion component to both classes.

Table 2
Pre-Test: Results of Statistical Comparisons between the
Scores of the Experimental and Control Groups

	<u>Experimental Group</u>			<u>Control Group</u>			t-value
	n	$\bar{X}$	S.D.	n	$\bar{X}$	S.D.	
Cloze Test	149	16.6	14.2	153	18.3	17.0	0.93 ^{n.s.}
Written Composition	147	44.0	26.6	152	45.8	29.0	0.55 ^{n.s.}
Oral Interview	48	31.6	22.7	47	35.3	22.3	0.81 ^{n.s.}

n.s. = Not significant.

Table 3
Results of Repeated Measures Analysis of Variance
(Class as Unit of Analysis)

Source	Df	Mean Squares	F-Ratio
Cloze Test			
Group	1	510.609	1.51 ^{n.s.}
Time	2	1173.211	26.79 ^{***}
Group x Time	2	196.781	4.49 [*]
Within Subjects	20	43.794	
Written Composition			
Group	1	1010.531	2.94 ^{n.s.}
Time	2	1328.906	19.86 ^{***}
Group x Time	2	361.477	5.40 ^{**}
Within Subjects	20	66.903	
Oral Interview			
Group	1	81.680	0.25 ^{n.s.}
Time	2	1673.461	27.13 ^{***}
Group x Time	2	114.773	1.86 ^{n.s.}
Within Subjects	20	61.681	

n.s. = Not Significant.

*Significant at the .02 level.

**Significant at the .01 level.

***Significant at the .001 level.

Figure 1
Curriculum Unit: Outline of Activities

Introduction and Activity 1
(Approximately nine 45-minute periods)

Strategy	Task	Description
Teacher		Formation of groups; Linguistic Game A
Group work	I	^a Planning a space colony: discussion of elements essential for human survival and preliminary plan
	II	^a Discussion of futuristic elements in <u>Surréal 3000</u> (Chapters 1-3)
Individual work		Self-evaluation
Group work	III	^a Preparation of oral report
Group work	IV	^a Presentation and evaluation of oral reports
Group work	V	^a Revision of the plan
Individual work		Self-evaluation

Activity 2
(Approximately six 45-minute periods)

Strategy	Task	Description
Group work	I	^a Making a drawing, model, or collage of the plan
Group work	II	^a Selection of ten most important elements in the space colony and preparation of a written report explaining their function
Group work	III	^a Preparation of a newspaper article describing the life of the space pioneers
Individual work		Self-evaluation

^aEach period is preceded by a linguistic game or warm-up exercise based on the games.

Figure 2
Description of Linguistic Games

• **Linguistic Game A, Le conditionnel et la politesse**

The teacher first explains the use of the conditional for making polite requests and provides the rules for forming the conditional. Student groups are given 10 sentences and are asked to rephrase the sentences to make them more polite. They are then asked to create and role-play situations in which requests are made first by an authoritarian and then by a courteous person.

• **Linguistic Game B, Jeu des hypothèses**

This game is designed to encourage students to use the conditional in hypothetical situations. Students are provided with 8 scientific situations in which they are asked to discuss what would happen if certain specified changes were made in each of them.

• **Linguistic Game C, Jeu des Si . . . , alors**

Version 1. The teacher writes on the board a list of hypothetical clauses beginning with Si . . . , alors and gives student groups 10 minutes to make up as many endings as possible. The teacher then chooses one of the hypothetical clauses at random and asks one of the groups to complete it in as many ways as possible in 30 seconds. The teacher then continues with the remaining clauses and groups. One point is assigned each time a correct conditional is used, and the group with the greatest number of points is named the winner.

Version 2. This version is similar to Version 1 except that students work with a different set of hypothetical clauses and individually prepare written responses at home. The individual responses are reviewed in each group before playing the game, as outlined in Version 1.

Version 3. Student groups make up their own hypothetical clauses and ask the other groups to complete them.

Version 4. A list of 20 hypothetical clauses is distributed to all students, and they are asked to write an ending to each of these.

Version 5. Students make up their own hypothetical sentences, using the 1st and 2nd persons singular or plural.

Figure 3
Graphic Presentation of Group Means on the Cloze Test,
Written Composition, and Oral Interview
(Class as Unit of Analysis)

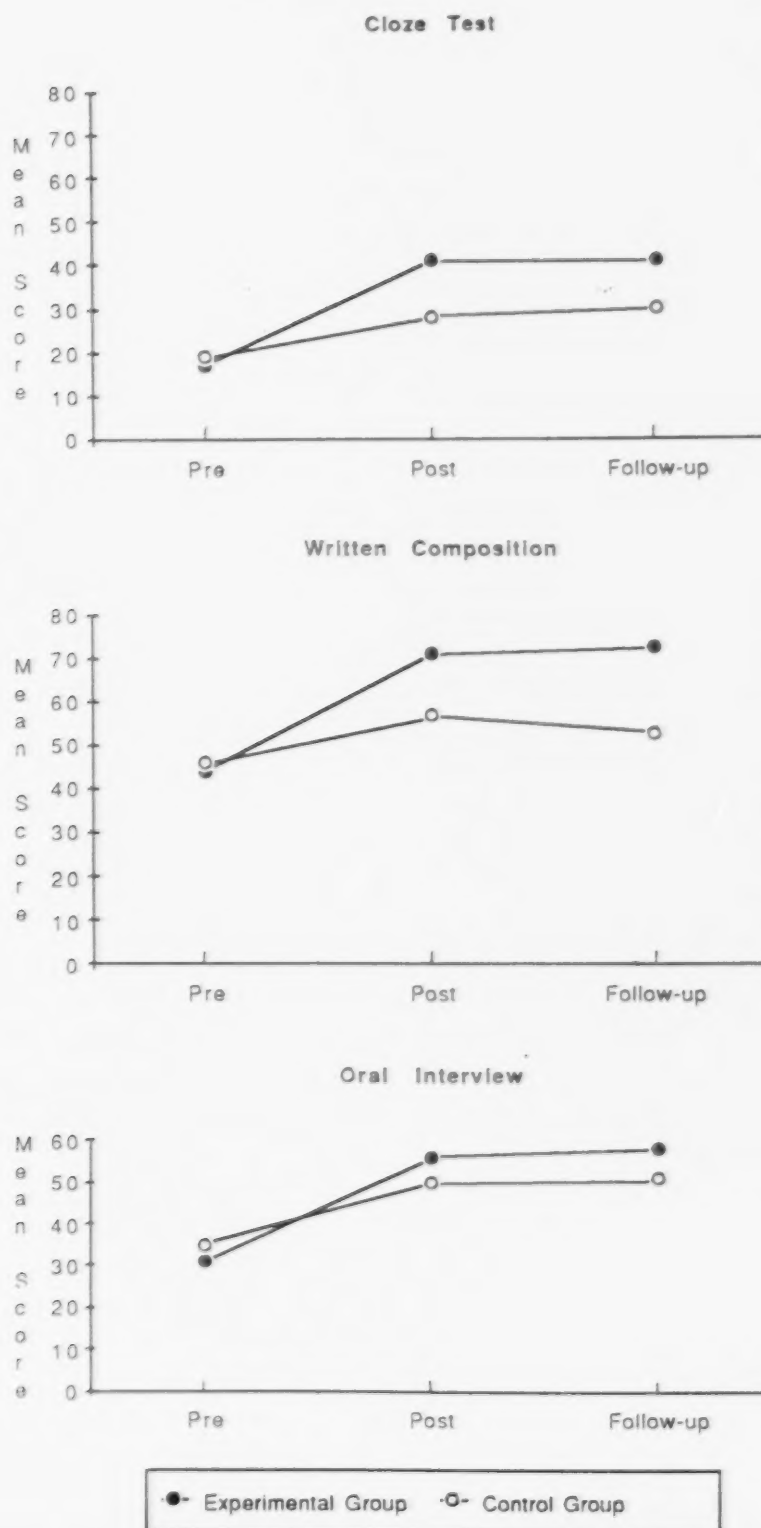
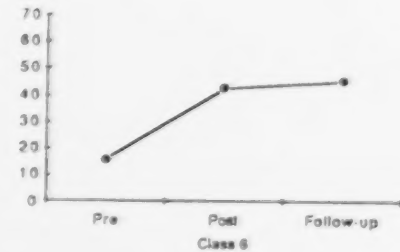
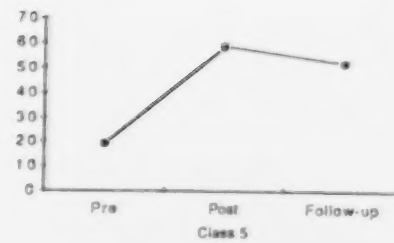
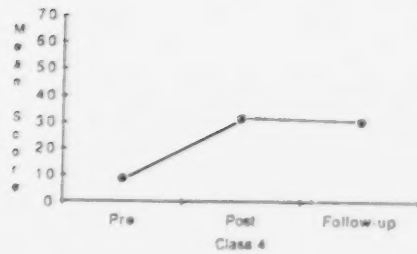
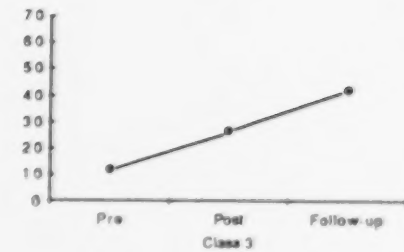
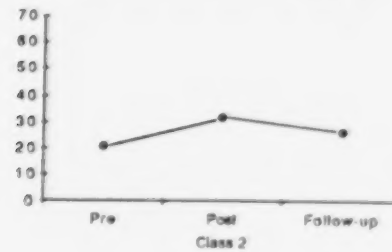
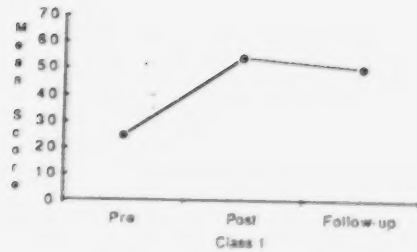


Figure 4
Graphic Presentation of Class Means on the Cloze Test

Experimental Group



Control Group

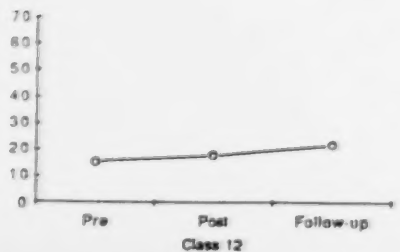
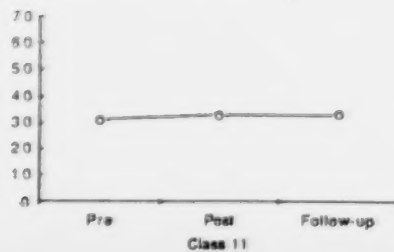
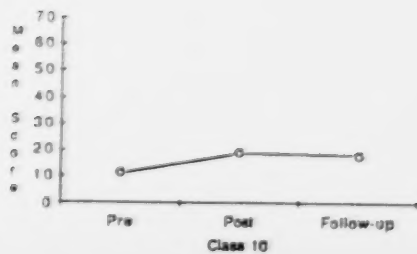
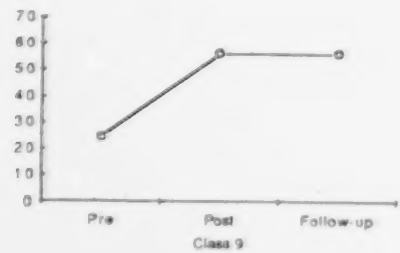
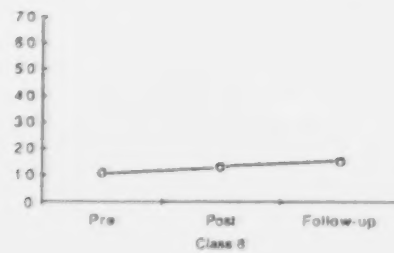
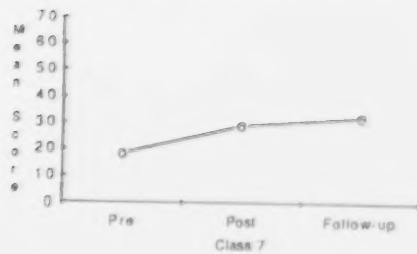
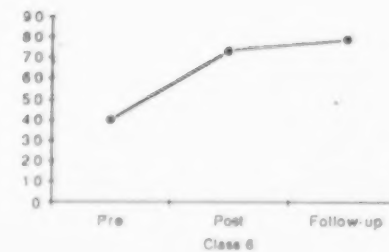
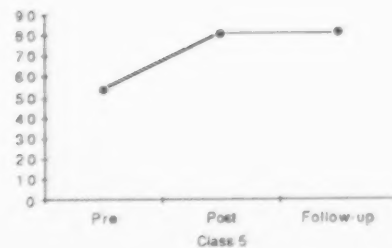
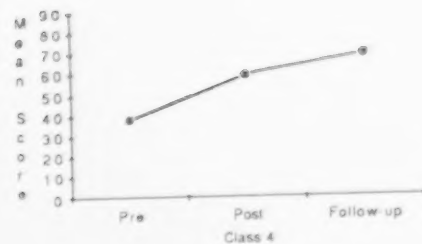
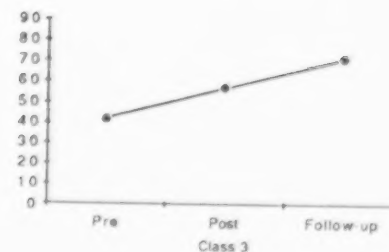
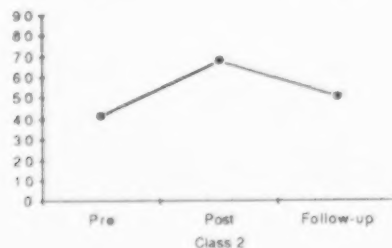
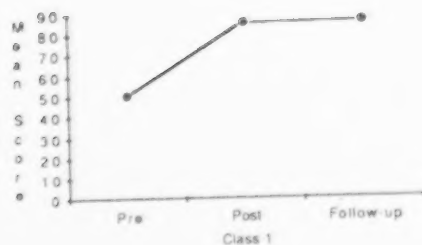


Figure 5
Graphic Presentation of Class Means on the Written Composition

Experimental Group



Control Group

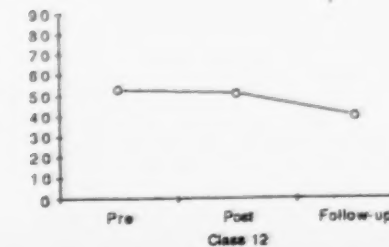
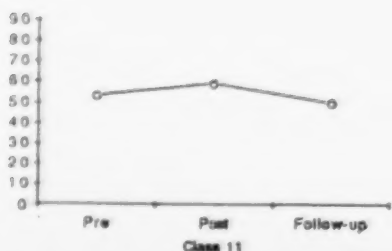
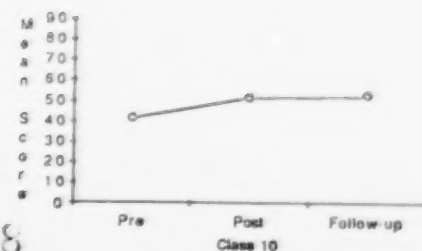
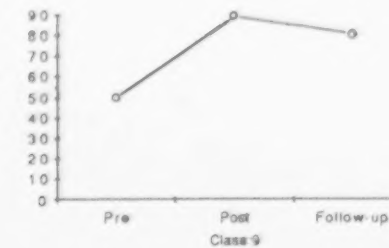
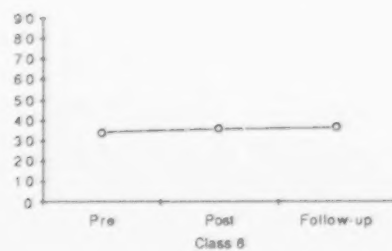
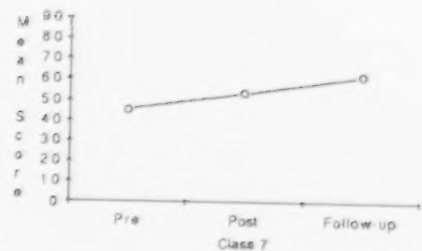
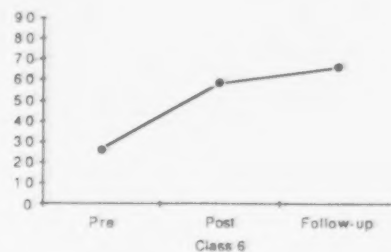
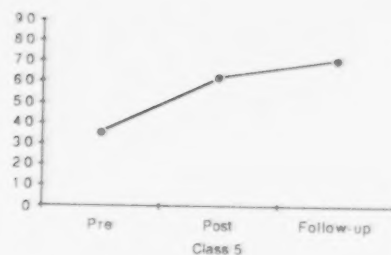
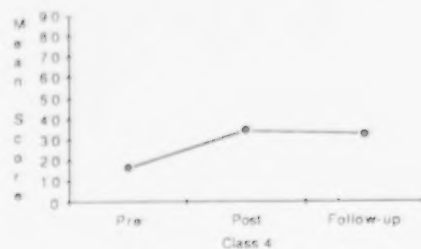
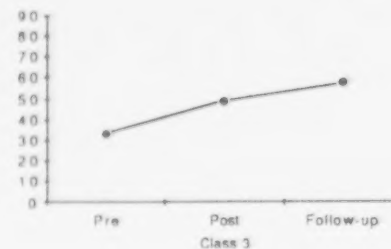
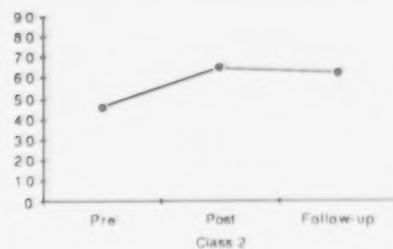
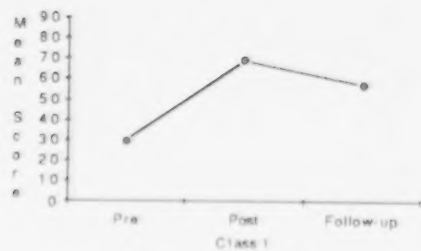


Figure 6
Graphic Presentation of Class Means on the Oral Interview

Experimental Group



Control Group

